

---

**Claims:**

What is claimed is:

1     1.     A system having first and second processes residing on first and second computers  
2     used with backup or restore operations, wherein said first and said second computers are  
3     in communication with a data storage system on a network, said system comprising:

4             at least one first communication mechanism residing on both said first and second  
5     computers for facilitating communications between said first and second processes over  
6     said network;

7             a second communication mechanism residing on both said first and second  
8     computers for facilitating communication between said first and second processes through  
9     said data storage system; and

10            means, within said first and second processes, for allowing said first and second  
11    processes to determine whether a call from said first and second processes is for first or  
12    second communication mechanism.

1     2.     The system of claim 1, wherein said first and second processes are part of a backup  
2     or restore process.

1     3.     The system of claim 2, wherein said at least one first communication mechanism is  
2     a network socket.

1     4.     The system of claim 3, wherein said second communication mechanism is a data  
2     storage system socket, and said data storage system socket allows information to be  
3     transferred from said first process to said second process through said data storage  
4     system.

1     5.     The system of claim 1, wherein said backup and restore operations are capable of  
2     backing up and restoring information from file system or database applications.

1     6.     A method for assisting with backup and restore operations in a computer system,  
2     the method comprising the steps of:

3             (a)     establishing at least one first connection over a network, between first and  
4     second processes residing on different computers; and

5             (b)     establishing, in parallel with establishing said at least one first connection, a  
6     second connection, through a data storage system, between said first and said second  
7     processes.

1     7.     The method of claim 6, wherein step (a) comprises the step of:  
2             creating a pair of communication mechanisms on a designated port.

1 8. The method of claim 7, wherein step (a) further comprises the steps of:  
2 requesting with one member of said communication mechanism pair a connection  
3 to said other member of said communication mechanism pair; and  
4 in response to said connection request, accepting said connection request.

1 9. The method of claim 8, wherein step (a) further comprises the step of:  
2 creating a second pair of communication mechanisms on the designated port,  
3 wherein said second pair of communication mechanisms is used for transferring a  
4 different type of information than would be transferred over said first pair of  
5 communication mechanisms.

1 10. The method of claim 9, wherein step (a) further comprises the steps of:  
2 requesting with one member of said second pair of communication mechanisms, a  
3 connection to said other member of said second pair of communication mechanisms; and  
4 in response to said connection request, accepting said connection request.

1 11. The method of claim 6, wherein step (b) comprises the steps of:  
2 creating a third pair of communication mechanisms on a second designated port.

1 12. The method of claim 11, wherein step (b) further comprises the steps of:  
2 requesting with one member of said third pair of communications mechanisms a  
3 connection to said other member of said second pair of communications mechanisms; and  
4 in response to said connection request, accepting said connection request.

---

1     13.     The method of claim 12, wherein step (b) further comprises the steps of:  
2             receiving information about a group of resources in said data storage system;  
3             in response to receiving information about said group of resources, creating a  
4     fourth pair of communication mechanisms on a dynamically allocated port; and  
5             connecting said fourth pair of communication mechanisms to each other through  
6     said data storage system.

1     14.     The method of claim 6, wherein said backup and restore operations are for  
2     backing up and restoring information from a file system application.

1     15.     A method for assisting with backup and restore operations in a computer system,  
2     the method comprising:  
3             establishing a connection, over a network, between a first process and a second  
4     process residing on different computers;  
5             receiving information about a dynamically allocated port over the established  
6     connection;  
7             establishing a second connection over the network, on the dynamically allocated  
8     port, between said first and second processes;  
9             identifying resources on a data storage devices to be used in order to transfer  
10     information through said data storage device; and  
11             establishing a connection between said first and second processes through said  
12     data storage system.

---

1 16. The method of claim 15, wherein said backup and restore applications are used in  
2 conjunction with a database application.